

RCloud Tasking Form – Part B: Statement of Requirement (SoR)

Title of Requirement	Low Burden CBRN Personal Protective Counter Terrorism Suit
Requisition No.	RQ0000009167
SoR Version	0.1

1.	Statement of Requirements
1.1	Summary and Background Information
	<p>Counter Terrorism (CT) operations within the context of a CBRN environment present a set of unique and challenging issues in relation to combat missions. The ability for specialist combat troops to maintain the highest levels of human performance whilst still utilising CBRN PPE is mission critical. The use of current CBRN PPE impose a significant physiological burden on the wearer and has a detrimental impact on performance. To remain effective, the commander should have the option of using a low burden CBRN CT suit when facing a CBRN CT or Asymmetric threat. The low burden CBRN CT suit will enhance unit performance by providing operationally relevant, individual protection throughout the battle space during operations, whether on Land, Sea and Air.</p> <p>Dstl wished to place a contract to develop a new prototype low burden Chemical, Biological, Radiological and Nuclear (CBRN) Personal Protection Counter Terrorism (CT) suit to TRL 5, which meets the performance criteria set out in NATO Standard AEP-85.</p> <p>The first phase of work consisted of two tasks (Task 1 and Task 2) where the objective is to provide:</p> <ul style="list-style-type: none"> Task 1 – Fabric swatches for chemical warfare agent (CWA) testing using sulphur mustard (HD), soman (GD), sarin (GB) and VX. Physical properties (mass, thickness, air permeability, thermal resistance, evaporative resistance, tensile strength, tear strength, abrasion resistance, FR and IR signature properties) for each material should be provided by the supplier. Task 2 – 21 prototype garments (7 garments in 3 sizes; User sizes to be provided by Dstl) suitable for a User assessment to check size, fit, form, interoperability and durability. <p>On completion of these tasks, a downselection of suppliers was undertaken, resulting in a single supplier being identified to go forward to deliver Phase 3</p> <p>Phase 3 will involve the delivery of 30 prototype garments at TRL 6 for Dstl full-system CWA testing and a User assessment to check size, fit, form, interoperability and durability. These are to be delivered in batches of 15, with further development windows being made available to react to the findings from Full System testing.</p>
1.2	Requirement
	<p>Requirement (essential/Mandatory/options/elements):</p> <ul style="list-style-type: none"> A full list of the requirements are stated in the Statement of Requirement section 1.4. <p>Deliverables</p>

	<ul style="list-style-type: none"> The full list of deliverables are outlined in the Statement of Requirements section 1.6
1.3	Options or follow on work <i>(if none, write 'Not applicable')</i>
	The options included within this tasking (D 3 and D 4) are dependant on the performance of the prototype garments performance during Full System Test 1.
1.4	Contract Management Activities
	Monthly progress meetings and report from contract award.
1.5	Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement
	ISO9001 (Quality Management Systems)

1.6	Deliverables & Intellectual Property Rights (IPR)					
Ref.	Title	Due by	Format	Expected classification (subject to change)	What information is required in the deliverable	IPR Condition
Phase 3 – D 0	Development Window 1	16 June 22	Prototype suit showing development from Phase 2 Technical feedback	Redacted – FOI Exemption	Development, manufacture and supply of prototype garment to TRL 6. This prototype garment will be assessed for suitability and accepted by relevant Dstl SME prior to delivery of D 1.	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners
Phase 3 – D 1	Prototype garments	D0+2 Months 16 Aug 22	15 prototype garments	Redacted – FOI Exemption	Development, manufacture and supply of 15 prototype garments to TRL 6. These prototype garments will be	DEFCON 705 Standard R-Cloud T&Cs

					delivered to Dstl for full-system CWA testing and a User assessment to check size, fit, form, integration, interoperability and durability.	MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners
Phase 3 D 2	Technical design report from D 0	D0+2 Months 16 Aug 22	PDF (Full rights) PDF (Limited rights) PDF Full rights (Lower classification)	Redacted – FOI Exemption Redacted – FOI Exemption	Annex for Report detailing the pattern design and size grading (this will include provider, estimated cost of purchase & lead times, CAD data, and measurements used). Showing amendments made in first development window (D 0)	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners
Phase 3 – D 3 (OPTION)	Development Window 2	D1 +5 Months 16 Nov 2022	Prototype suit showing development from FST 1 feedback	Redacted – FOI Exemption	Development, manufacture and supply of prototype garment to TRL 6. This prototype garment will be assessed for suitability and	DEFCON 705 Standard R-Cloud T&Cs

					<p>accepted by relevant Dstl SME prior to delivery of D 4.</p> <p>This will be based on feedback from Full system test round 1 and is optional based on potential for suit to meet standard at this point.</p>	<p>MOD may want to exploit outputs and transition to DE&S</p> <p>MOD may want to share with other contractors and international partners</p>
<p>Phase 3 – D 4 (OPTION)</p>	<p>Prototype garments</p>	<p>D1+6 Months</p> <p>31 Jan 2023</p>	<p>15 prototype garments</p>	<p>Redacted – FOI Exemption</p>	<p>Development, manufacture and supply of 15 prototype garments to TRL 6. These prototype garments will be delivered to Dstl for full-system CWA testing and a User assessment to check size, fit, form, integration, interoperability and durability.</p>	<p>DEFCON 705</p> <p>Standard R-Cloud T&Cs</p> <p>MOD may want to exploit outputs and transition to DE&S</p> <p>MOD may want to share with other contractors and international partners</p>

					This will be based on feedback from Full system test round 1 and is optional based on potential for suit to meet standard at this point.	
Phase 3 – D5	Development and delivery of swatch samples for testing	D0+1months	12 x A4 samples per material		<p>Required:</p> <p>70g Carbon with outer (to test to AEP38)</p> <p>70g Stretch with outer (to test to AEP 38)</p> <p>100g Carbon with outer (to test to AEP 38 Legacy)</p> <p>100g Laminate (to test to AEP 38)</p>	<p>DEFCON 705</p> <p>Standard R-Cloud T&Cs</p> <p>MOD may want to exploit outputs and transition to DE&S</p> <p>MOD may want to share with other contractors and international partners</p>

Phase 3 – D6	Material report	D0+1 month	PDF (full rights) PDF (Limited rights) PDF Full rights (Lower classification)	Redacted – FOI Exemption Redacted – FOI Exemption Redacted – FOI Exemption	Report detailing the technical specification of individual materials and construction methods of the assembled fabrics (listed in D5) against each of the requirements. Physical properties (mass, thickness, air permeability, thermal resistance, evaporative resistance, tensile strength, tear strength, abrasion resistance, FR and IR signature properties) and oil, water repellency ratings for each material should be provided by the supplier. Cost estimates, minimum order amounts and lead times for the materials delivered must also be included.	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners
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Phase 3 – D7(.1-4) (Option)	Development and delivery of secondary swatch samples for testing	D5+7 months	12 x A4 samples per material		Required (If enacted): D7.1 - 90g Carbon with outer D7.2 - 90g Carbon Laminate D7.3 - 110g Carbon with outer D7.4 - 110g Carbon Laminate (Could these be assessed and costed as separate items)	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners
Phase 3 – D8 (OPTION)	Material report	D5+7 months	PDF (full rights) PDF (Limited rights) PDF Full rights (Lower classification)	Redacted – FOI Exemption Redacted – FOI Exemption Redacted – FOI Exemption	Report detailing the technical specification of individual materials and construction methods of the assembled fabrics (listed in D7) against each of the requirements. Physical properties (mass, thickness, air permeability, thermal resistance, evaporative resistance, tensile	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and

					strength, tear strength, abrasion resistance, FR and IR signature properties) and oil, water repellency ratings for each material should be provided by the supplier. Cost estimates, minimum order amounts and lead times for the materials delivered must also be included.	international partners
Phase 3 – D9	Final technical report – Phase 3	D1+9 Months 28-Mar-23	PDF (Full rights) PDF (Limited rights) PDF Full rights (Lower classification)	Redacted – FOI Exemption Redacted – FOI Exemption Redacted – FOI Exemption	Garment technical data pack to include report detailing the pattern design and size grading, all material specifications and garment construction methods (this will include provider, estimated cost of purchase & lead times, CAD data, and measurements used). This should include all relevant adjustments made	DEFCON 705 Standard R-Cloud T&Cs MOD may want to exploit outputs and transition to DE&S MOD may want to share with other contractors and international partners

					during task D 0 and D 3 (if enacted)	
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1.7	Deliverable Acceptance Criteria
	All reports included as Deliverables under the Contract must comply with the Defence Research Reports Specification (DRRS) https://www.gov.uk/guidance/submit-a-report-to-athena , which defines the requirements for the presentation, format and production of scientific and technical reports, prepared for the MOD.

2	Evaluation Criteria
2.1	Method Explanation
	The criteria for selection for Phase 3 will be conducted as a single Source contract and therefore no formal evaluation will be undertaken
2.2	Technical Evaluation Criteria
	In conjunction with Technical evaluation already undertaken during Phase 1 and 2
2.3	Commercial Evaluation Criteria
	Commercial evaluation will be undertaken to ensure submission is in line with R-Cloud T&C's